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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,580	12/20/2001	Jason F. Hunzinger	09752-147001	4973

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EXAMINER

FERGUSON, KEITH

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,580

Applicant(s)

HUNZINGER, JASON F.

Examiner

Keith T. Ferguson

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 and 30-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2683

DETAILED ACTION

Claim Objections

1. Claims 2-10 and 22-30 are objected to because of the following informalities: Regarding claim 2, line 1, and throughout, For example the phrase "Claim 1" should recite "claim 1". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4,8-10,21-24 and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Leblanc et al..

The claimed invention reads on Leblanc et al. as follows:
Regarding claims 1 and 2, Leblanc et al. discloses a method (fig. 8 and col. 71 line 18 through col. 77 line 54) tracking earliest (PN sequence offset value/PN chips) pilot phase offsets for geo-location determination (col. 21 line 14 through col. 22

Art Unit: 2683

line 11 and col. 35 lines 3-24) comprising: determining search window limitations for one or more base station sectors due to mobile station dynamics (mobile station power class/transmit power level between sectors) (col. 21 line 14 through col. 22 line 11); and searching for earliest (PN sequence offset value/PN chips) pilot phase offsets of the sectors using the determined search window (col. 21 line 14 through col. 22 line 11).

Regarding claims 3 and 23, Leblanc et al. discloses determining earliest path times from latest of a set of sectors (base station 122) by a cell size based factor (i.e. cell size for handoff or soft handoff) (col. 21 line 44 through col. 22 line 10).

Regarding claims 4 and 24, Leblanc et al. discloses earliest path times from a set of sectors by a cell size based factor (i.e. cell size for handoff or soft handoff) (col. 21 line 44 through col. 22 line 10).

Regarding claims 8 and 28, Leblanc et al. discloses transmitting cell size based limitations (delay elements which contain omniscell sizes and radius) to a mobile station col. 35 lines 11-24 through col. 36 line 34).

Art Unit: 2683

Regarding claims 9 and 29, Leblanc et al. discloses overheads or other messages (col. 24 lines 54-67).

Regarding claims 10 and 30, Leblanc et al. discloses using results of phase measurement in position location algorithms (TOA or TDOA) (col. 35 lines 3-24).

Regarding claims 21 and 22, Leblanc et al. discloses a wireless communication system (fig. 2) which tracks earliest pilot phase offsets (PN sequence offset value/PN chips) for geo-location determination (col. 21 line 14 through col. 22 line 11 and col. 35 lines 3-24) comprising: one or more base stations (fig. 2 number 122), each of the one or more base stations serving a cell divided into one or more sectors (fig. 2); and mobile station which determines search window limitations for the one or more sectors due to the cell coverage area and due to mobile station dynamics (col. 21 line 14 through col. 22 line 11 and col. 35 lines 3-24), wherein the mobile station searches for the earliest pilot phase offsets (PN sequence offset value/PN chips) of the one or more sectors using the determined search windows (col. 21 line 14 through col. 22 line 11).

Art Unit: 2683

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 5-7 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leblanc et al. in view of Kim et al..

Regarding claims 5 and 25, Leblanc et al. discloses a method/system as discussed supra in claims 1 and 21 above. Leblanc et al. differs from claims 5 and 25 of the present invention in that it does not disclose setting the search window size asymmetrically from an early and a late side. Kim et al. teaches a tracking circuit within a mobile telephone for setting the search window size asymmetrically from an early and a late side for tracking a received communication signal (col. 1 lines 6-12, col. 2 lines 15-35 and fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leblanc et al. method/system with setting the search window size asymmetrically from an early and a late side in order for the wireless system to communicate with the mobile station and for mobile station to fine tune the received signals between base stations of the system to determine its position, as taught by Kim et al..

Regarding claims 6,7,26 and 27, Leblanc et al. discloses a method/system as discussed supra in claims 1 and 21 above. Leblanc et al. differs from claims 6,7,26 and 27 of the present invention in that it does not disclose setting an early side of the search window based on cell size and speed of a mobile station and setting a later side of the search window based on a speed of a mobile station. Kim et al. teaches system wherein a tracking circuit within a mobile telephone for setting the search window size asymmetrically from an early and a late side

Art Unit: 2683

for tracking a received communication signal (col. 1 lines 6-12, col. 2 lines 15-35 and fig. 4), setting an early side of the search window based on cell size (signal to noise ratio by M) and speed (velocity) of a mobile station (M) (col. 3 lines 14-56 and col. 5 line 54 through col. 6 line 63), and setting a later side of the search window based on a speed (velocity) of a mobile station (col. 3 lines 14-56 and col. 5 line 54 through col. 6 line 63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leblanc et al. method/system with setting an early side of the search window based on cell size and speed of a mobile station and setting a later side of the search window based on a speed of a mobile station in order for the system to communicate with the mobile station and for the mobile station to determine its location base on the speed of the mobile station and the time of arrival of PN offsets of nearby base station when entering a handoff or soft handoff, as taught by Kim et al..

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yang et al. (U.S. Patent 6,785,321) discloses estimating of arrival of a spread spectrum signal in a wireless communication system (col. 3 lines 35-56 and col. 4 lines 33-67). Storm et al. (U.S. Patent 5,889,768) discloses a method for pilot channel acquisition. Bruckert et al. (U.S. Patent 6,226,317) discloses a method for aiding in the location of a subscriber unit in a spread spectrum communication system.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith T.

Art Unit: 2683

Ferguson whose telephone number is (703) 305-4888. The examiner can normally be reached on 6:30am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Keith Ferguson 
Art Unit 2683
December 28, 2004